CLAIM AMENDMENTS

A listing of an entire set of claims 1-32 is submitted herewith per 37 CFR §1.121 to replace all prior versions, and listings, of claims in the application.

1.   (Currently Amended) A method for timing recovery in a communication system using cyclic extension of a plurality of symbols, the method comprising:

computing ensemble correlation function [output] from the plurality of symbols;

determining a valid sampling region based on a width of a plateau of the ensemble correlation function [output]; and

determining at least one sampling position for at least one symbol based on the valid sampling region.

2.   (Currently Amended) The method of claim 1, further comprising defining the valid sampling region based on a comparison of the ensemble correlation function [output] to a threshold.

3.   (Currently Amended) The method of claim 1, further comprising:

filtering the ensemble correlation function [output].

4.   (Original) The method of claim 3 wherein the filtering occurs prior to determining the valid sampling region.

5.   (Currently Amended) The method of claim 3, further comprising:

using a median filter to filter the ensemble correlation function [output].

6.   (Currently Amended) The method of claim 1, further comprising:

determining a peak value included in the ensemble correlation function [output].

7.   (Previously Presented) The method of claim 6, further comprising:

determining a threshold as a function of the peak value.

8.   (Currently Amended) A system, comprising:

a correlator for computing an ensemble correlation function [output] from a plurality of received symbols; [and]

a subtractor, operatively coupled to the correlator, for determining a valid sampling region based on a width of a plateau of the ensemble correlation function [output]; and

a sampling position selector, operatively coupled to the correlator, for determining at least one sampling position for at least one symbol based on the valid sampling region.

9.   (Currently Amended) The system of claim 8, further comprising:

a filter, operatively coupled to the correlator, for filtering the ensemble correlation function [output] .

10.   (Currently Amended) The system of claim 9, further comprising:

a maximum detector, operatively coupled to the filter, for determining a peak value included in the filtered ensemble correlation function [output].

11.   (Currently Amended) The system of claim 8, further comprising:

a comparator, [operatively coupled to] operatively coupling the correlator to the subtractor and the sampling position selector, for comparing the ensemble correlation function [output] to a threshold to define the valid sampling region.

12.   (Original) The system of claim 8, for use in a receiver.

13.   (Original) The system of claim 12, wherein the receiver is wireless.

14.   (Original) The system of claim 8, further comprising:

          at least one phase locked loop for tracking edges of the plateau.

15.   (Currently Amended) A method for estimating [delay spread] delay-spread in
a communication system using cyclic extension of a plurality of symbols, the method
comprising:

          computing an ensemble correlation function [output] from the plurality of
symbols; and

          using the ensemble correlation function [output] to estimate the delay-spread.

16.   (Currently Amended) The method of claim 15, further comprising:

          comparing the ensemble correlation function [output] to a
threshold to define a valid sampling region; and

          subtracting a width of the valid sampling region from a length of
the cyclic extension of a symbol to obtain the estimate of the [delay spread] delay-
spread.

17.   (Currently Amended) The method of claim 15, further comprising:

          filtering the ensemble correlation function [output].

18.   (Currently Amended) The method of claim 17, further comprising:

          using a median filter to filter the ensemble correlation function [output].

19.   (Currently Amended) The method of claim 15, further comprising:

          determining a peak value included in the ensemble correlation function
[output].

20.   (Previously Presented) The method of claim 19, further comprising:

        determining a threshold as a function of the peak value.

21.   (Currently Amended) The method of claim 16, wherein threshold crossing points of the ensemble correlating function [output] define the valid sampling region.

22.   (Currently Amended) A system for estimating delay-spread in a communication system using cyclic extension, comprising:

        a correlator for computing an ensemble correlation function [output] from a plurality of symbols; and

        a delay-spread estimator, operatively coupled to the correlator, for estimating the delay-spread.

23.   (Currently Amended) The system of claim 22, wherein the [delay spread] delay-spread estimator includes:

        a comparator, operatively coupled to the correlator, for comparing the ensemble correlation function [output] to a threshold to define a valid sampling region; and

        a subtractor, operatively coupled to the comparator, for subtracting a width of the valid sampling region from a length of the cyclic extension of [the] a symbol to obtain the estimate of the [delay spread] delay-spread.

24.   (Currently Amended) The system of claim 22, further comprising:

        a filter, operatively coupled to the correlator, for filtering the ensemble correlation function [output].

25.   (Currently Amended) The system of claim 24, further comprising:

        a maximum detector, operatively coupled to the filter, for determining a peak value included in the filtered ensemble correlation function [output].

26.   (Original) The system of claim 22, for use in a receiver.

27.   (Original) The system of claim 26, wherein the receiver is wireless.

28.   (Currently Amended) A method for adapting a receiver in a communication system using cyclic extension of a plurality of symbols, the method comprising:

        computing an ensemble correlation function [output] from the plurality of symbols;

        determining a multipath channel characteristic based on the ensemble correlation function [output]; and

        adapting the receiver based on the multipath channel characteristic.

29.   (Original) The method of claim 28, wherein the multipath channel characteristic is delay-spread.

30.   (Original) The method of claim 28, wherein the step of adapting comprises:

        determining one or more coefficients of a channel estimation filter in the receiver.

31.   (Previously Presented) The method of claim 28, wherein the step of adapting comprises:

        identifying an inter-symbol-interference free portion of the cyclic extension of a received symbol; and

        combining the inter-symbol-interference free portion of the cyclic extension with the received symbol.

32.   (Currently Amended) The method of claim 28 wherein the step of adapting comprises:

        determining at least one sampling position for at least one symbol based on the [multi-path] multipath channel characteristic.